



BILLING CODE 3510-22-P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

RIN 0648-XG205

Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to the Mukilteo Multimodal Project - Season 3

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice; proposed incidental harassment authorization; request for comments.

SUMMARY: NMFS has received a request from the Washington Department of Transportation (WSDOT) Ferries Division (WSF) for an incidental harassment authorization (IHA) that would cover a subset of the take authorized in an IHA previously issued to WSDOT to incidentally take marine mammals, by Level B harassment only, during construction activities associated with the Mukilteo Multimodal Project, Puget Sound, Washington. During planning of season 2 of the project (for which NMFS issued an IHA) it was assumed that the project would be completed within the year timeframe; however, that was not accomplished. Therefore, WSDOT is requesting, and NMFS is proposing to issue, an IHA authorizing incidental take for the remaining work which was already analyzed in an 2017 IHA issued to WSDOT on August 3, 2017 (herein after referred to as the 2017 IHA) (September 21, 2017). However, some changes have occurred during this year's evaluation of the project. Source levels and harassment distances have been adjusted based on recent acoustic measurements and amount of time pile driving expected to occur each day. In addition, WSDOT has requested take for three

species not included in the 2017 IHA (minke whales (*Balaenoptera acutorostrata*), bottlenose dolphins (*Tursiops truncatus*), and long-beaked common dolphins (*Delphinus delphis bairdii*)) based on recent marine mammal monitoring. The proposed mitigation, monitoring, and reporting measures remain the same as prescribed in the 2017 IHA with slight modifications (e.g., shut down zones distance changes) as described below.

NMFS is requesting comments on its proposal to issue an IHA to incidentally take marine mammals during the completion of Phase 2 of the Mukilteo Multimodal Project. NMFS will consider public comments prior to making any final decision on the issuance of the requested MMPA authorization and agency responses will be summarized in the final notice of our decision.

DATES: Comments and information must be received no later than **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

ADDRESSES: Comments should be addressed to Jolie Harrison, Chief, Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service. Physical comments should be sent to 1315 East-West Highway, Silver Spring, MD 20910 and electronic comments should be sent to *ITP.daly@noaa.gov*.

Instructions: NMFS is not responsible for comments sent by any other method, to any other address or individual, or received after the end of the comment period. Comments received electronically, including all attachments, must not exceed a 25-megabyte file size. Attachments to electronic comments will be accepted in Microsoft Word or Excel or Adobe PDF file formats only. All comments received are a part of the public record and will generally be posted online at

<https://www.fisheries.noaa.gov/node/23111> without change. All personal identifying information (e.g., name, address) voluntarily submitted by the commenter may be publicly accessible. Do not submit confidential business information or otherwise sensitive or protected information.

FOR FURTHER INFORMATION CONTACT: Jaclyn Daly, Office of Protected Resources, NMFS, (301) 427-8438. Electronic copies of the original application and supporting documents (including NMFS FR notices of the original proposed and final authorizations), as well as a list of the references cited in this document, may be obtained online at

<https://www.fisheries.noaa.gov/node/23111>. In case of problems accessing these documents, please call the contact listed above.

SUPPLEMENTARY INFORMATION:

Background

Sections 101(a)(5)(A) and (D) of the MMPA (16 U.S.C. 1361 *et seq.*) direct the Secretary of Commerce (as delegated to NMFS) to allow, upon request, the incidental, but not intentional, taking of small numbers of marine mammals by U.S. citizens who engage in a specified activity (other than commercial fishing) within a specified geographical region if certain findings are made and either regulations are issued or, if the taking is limited to harassment, a notice of a proposed authorization is provided to the public for review.

An authorization for incidental takings shall be granted if NMFS finds that the taking will have a negligible impact on the species or stock(s), will not have an unmitigable adverse impact on the availability of the species or stock(s) for subsistence uses (where relevant), and if the permissible methods of taking and requirements pertaining to the mitigation, monitoring and reporting of such takings are set forth.

NMFS has defined “negligible impact” in 50 CFR 216.103 as an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival. The MMPA states that the term “take” means to harass, hunt, capture, kill or attempt to harass, hunt, capture, or kill any marine mammal.

Except with respect to certain activities not pertinent here, the MMPA defines “harassment” as any act of pursuit, torment, or annoyance which (i) has the potential to injure a marine mammal or marine mammal stock in the wild (Level A harassment); or (ii) has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering (Level B harassment).

National Environmental Policy Act

To comply with the National Environmental Policy Act of 1969 (NEPA; 42 U.S.C. 4321 *et seq.*) and NOAA Administrative Order (NAO) 216-6A, NMFS must review our proposed action (i.e., the issuance of an incidental harassment authorization) with respect to potential impacts on the human environment.

This action is consistent with categories of activities identified in Categorical Exclusion B4 (incidental harassment authorizations with no anticipated serious injury or mortality) of the Companion Manual for NOAA Administrative Order 216-6A, which do not individually or cumulatively have the potential for significant impacts on the quality of the human environment and for which we have not identified any extraordinary circumstances that would preclude this categorical exclusion. Accordingly, NMFS has preliminarily determined that the issuance of the proposed IHA qualifies to be categorically excluded from further NEPA review.

We will review all comments submitted in response to this notice prior to concluding our NEPA process or making a final decision on the IHA request.

Summary of Request

On April 7, 2016, WSDOT submitted a request to NMFS requesting an IHA for the possible harassment of small numbers of marine mammal species incidental to construction associated with Phase 2 of the Mukilteo Multimodal Project in Mukilteo, Washington, between August 1, 2017, and July 31, 2018. NMFS issued the requested IHA on August 3, 2017, which covered Phase 2 of the project in its entirety and expires on July 31, 2018 (82 FR 44164; September 21, 2017). On January 9, 2018, we received a request from WSDOT for a subsequent authorization to take marine mammals incidental to the project because they realized all of the Phase 2 work would not be able to be completed under the existing IHA. A final version of the application, which we deemed adequate and complete, was submitted on March 1, 2018.

Description of the Proposed Activity and Anticipated Impacts

WSDOT operates and maintains 19 ferry terminals and one maintenance facility, all of which are located in Puget Sound or the San Juan Islands (Georgia Basin) (Figure 1-1 in WSDOT's application). The Mukilteo Multimodal Project is a multi-year construction project designed to improve the operations and facilities serving the mainland terminus of the Mukilteo-Clinton ferry route in Washington State. The 2017 IHA covered the installation of 661 piles of various sizes over an estimated 175 days of pile driving and removal (Table 1). WSDOT did not complete all the work, and now requests that this proposed IHA cover take incidental to the installation of the remaining piles (Table 1). The 2017 IHA authorized Level A and B harassment of two species of marine mammals and Level B harassment of seven species of

marine mammals (Table 2). WSDOT requests authorization to harass these same species and an additional three species based on recent marine mammal monitoring near the project area (Table 2).

To support public review and comment on the IHA that NMFS is proposing to issue here, we refer to the documents related to the previously issued IHA and discuss any new or changed information here. The previous documents include the *Federal Register* notice of the proposed IHA (82 FR 29713; May 10, 2017), *Federal Register* notice of issuance of the 2017 IHA (82 FR 44164, September 21, 2017), and all associated references and documents. We also refer the reader to WSDOT's previous and current applications and monitoring reports which can be found at <https://www.fisheries.noaa.gov/node/23111>.

Detailed Description of the Action—A detailed description of the proposed vibratory and impact pile driving and removal activities at the Mukilteo Terminal is found in the aforementioned documents. The location, timing, and nature of the pile driving operations, including the type and size of piles and the methods of pile driving, are identical to those described in the previous notices, except that only a subset of the type and number of piles are proposed to be driven. In total, 116 piles would be installed with a vibratory hammer. Sixty five of those piles would also be proofed with an impact hammer on the same day vibratory pile driving would occur. Sixty five of the installed 24-in piles (some of which may be proofed with the impact hammer) would be temporary and would also be removed. WSDOT anticipates piles equal to or less than 36" would be installed at a rate of 3 per day for a total of 38 days. An additional two days is needed to install the 78-in piles and 120-in piles. Sixty five of those piles would be removed at a rate of five per day for a total of 22 days. In total, up to 63 days of pile driving and removal may occur. WSDOT anticipates pile driving could occur over a seven month in-water work window (July

15-February 15).

Table 1. Description of Work Planned, Analyzed, and Completed under the 2017 IHA and Remaining Work Planned for 2018-2019.

Method	Pile Size (in)	Season 2 Planned (2017 IHA)	Season 2 Completed	Season 3 Planned (2018 IHA)	No. of Days	Comment
Vibratory Driving	12	139	134	0	0	Fewer needed, complete
	24	69	4	65	22	Up to 69 temporary
	24	48	0	26	9	Fewer needed, permanent
	30	40	25	16	5	Permanent
	36	6	0	6	2	Permanent
	78	2	0	2	1	Permanent
	120	1	0	1	2	Permanent
Vibratory Removal	sheet	90	0	0	0	Design change, not needed
	24	69	4	65	22	Temporary
	30	9	0	0	0	Delayed
Impact Driving	sheet	90	0	0	0	Design change, not needed
	24	69	4	65	22 ¹	Proofed for load-bearing
	30	30	25	0	0	Fewer needed, complete

¹ Impact hammering would be conducted on same day as vibratory pile driving so these are not additional days.

Description of Marine Mammals—A description of the marine mammals in the area of the activities is found in the previously cited documents, which remains applicable to this IHA as well. In addition, we include information here on three additional species which have been recently reported in Puget Sound and which WSDOT now requests take. We include a summary table here for all species and stocks for which take is requested.

Table 2. Species and Stocks Expected to Occur in Project Area.

Common name	Scientific name	Stock	ESA/MMPA status; Strategic (Y/N) ¹	Stock abundance (CV, N _{min} , most recent abundance survey) ²	PBR	Annual M/SI ³
Order Cetartiodactyla – Cetacea – Superfamily Mysticeti (baleen whales)						
Family Eschrichtiidae						
Gray whale	<i>Eschrichtius robustus</i>	Eastern North Pacific	N	20,990 (0.05, 20,125, 2014)	624	132
Family Balaenopteridae (rorquals)						
Humpback whale	<i>Megaptera novaeangliae</i>	California/Oregon/Washington	Y	1,918 (0.03, 1,876, 2017)	11.0	9.2
Minke whale*	<i>Balaenoptera acutorostrata</i>	California/Oregon/Washington	N	636 (0.72, 369, 2016)	3.5	1.3
Superfamily Odontoceti (toothed whales, dolphins, and porpoises)						
Family Delphinidae						
Killer whale	<i>Orcinus orca</i>	Eastern North Pacific Southern Resident	Y	76 (n/a, 76, 2017) ⁴	0	0.14
		West coast transient	N	unk (unk, 243 2013)	2.4	0
Bottlenose dolphin*	<i>Tursiops truncatus</i>	California coastal	N	453 (0.06, 346, 2016)	2.7	≥2
Long-beaked common dolphin*	<i>Delphinus delphis bairdii</i>	California	N	101,305 (0.49, 68,432, 2016)	657	35.4
Family Phocoenidae (porpoises)						
Harbor porpoise	<i>Phocoena phocoena</i>	Washington inland waters	N	11,233 (0.37, 8,308, 2016)	66	7.2
Dall's porpoise	<i>Phocoenoides dalli</i>	California/Oregon/Washington	N	25,750 (0.45, 17,954, 2016)	172	0.3
Order Carnivora – Superfamily Pinnipedia						
Family Otariidae (eared seals and sea lions)						
California sea lion	<i>Zalophus californianus</i>	U.S.	N	296,750 (n/a, 153,337, 2014)	9,200	389
Steller sea lion	<i>Eumetopias jubatus</i>	Eastern U.S.	N	52,139 (n/a, 41,638, 2015)	2,498	108
Family Phocidae (earless seals)						
Harbor seal	<i>Phoca vitulina</i>	Washington northern inland waters	N	11,036 (0.15, 1999)	1,641	43
Elephant seal	<i>Mirounga angustirostris</i>	California breeding	N	179,000 (n/a, 81,368, 2014)	2,882	8.8

¹ Endangered Species Act (ESA) status: Endangered (E), Threatened (T)/MMPA status: Depleted (D). A dash (-) indicates that the species is not listed under the ESA or designated as depleted under the MMPA. Under the MMPA, a strategic stock is one for which the level of direct human-caused mortality exceeds PBR or which is determined to be declining and likely to be listed under the ESA within the foreseeable future. Any species or stock listed under the ESA is automatically designated under the MMPA as depleted and as a strategic stock.

² NMFS marine mammal stock assessment reports online at: www.nmfs.noaa.gov/pr/sars/. CV is coefficient of variation; N_{min} is the minimum estimate of stock abundance.

³ These values, found in NMFS's SARs, represent annual levels of human-caused mortality plus serious injury from all sources combined (e.g., commercial fisheries, ship strike). Annual M/SI often cannot be determined precisely and is in some cases presented as a minimum value or range. A CV associated with estimated mortality due to commercial fisheries is presented in some cases.

⁴SRWK population abundance as of December 31, 2017 according to the Center for Whale Research.

⁵ Harbor seal estimate is based on data that are greater than 8 years old, but this is the best available information for use here.

*Indicates species added.

For species analyzed in the 2017 IHA, NMFS has reviewed recent draft Stock Assessment Reports (SARs), information on relevant Unusual Mortality Events, and recent scientific literature, and determined that no new information affects our original analysis of impacts or previous determinations except what is provided below.

Since issuing the 2017 IHA, NMFS published draft SARs (82 FR 60181; 19 December 2017) and the annual census for Southern Resident killer whales concluded. Stock information is updated for two species that have the potential to occur in the activity area: humpback whale and Southern Resident killer whale. Total annual mortality and serious injury for humpback whales increased from 6.5 to 9.2 and Southern Resident killer whale abundance decreased from 78 to 76 individuals (the most recent SAR information, i.e., the draft 2017 SAR for this stock, includes an abundance estimate of 83; however, we use the December 31, 2017, Center for Whale Research population estimate here). These proposed changes in the draft 2017 SARs do not affect our estimated take numbers or negligible impact and small numbers determinations, and therefore these changes do not affect our analysis. The potential presence of the three additional species (described below) during pile driving is very low; however, we are proposing to authorize take due to WSDOT's request and evidence there is a possibility they may be in the action area, albeit rarely.

Minke whale- The California-Oregon-Washington (CA-OR-WA) stock of minke whale may be found near the project site; however, this species is not common in Puget Sound. From 2013 through 2016, year-round systematic aerial surveys were conducted to better estimate

marine mammal density. No minke whales were observed during these surveys within Puget Sound and on only two occasions in September 2014 were minke whales ($n=2$) observed in nearby Strait of Juan de Fuca (Smultea *et al.* 2017). For the years 2010 to 2016, in the August to February timeframe scheduled for this project, The Whale Museum reported a total of six sightings days for minke whale in the Mukilteo project area (TWM, 2017). During 51 days of monitoring from September 2017 to February 2018 under the 2017 IHA, zero minke whales were observed (WSDOT, 2018).

Bottlenose dolphin- Bottlenose dolphins tend to inhabit warmer temperate and tropical waters and are not usually found in the colder waters of Puget Sound. However, bottlenose dolphins have been observed in Puget Sound as occasional visitors from both the offshore CA-OR-WA stock and California coastal stock since 1998 (CRC 2017a). More recently a group of dolphins observed in 2017 were positively identified as part of the CA coastal stock (CRC, 2017a, 2018). The more recent sightings in Puget Sound of several animals suggest a possible significant expansion of their range if they remain in the area. Such long distance travel outside their traditional range (>800 miles) may be due to long term changes in climate and shorter term fluctuations in coastal water conditions, such as those during El Niño events (CRC, 2017a). From September 2017 to February 2018, WSF conducted marine mammal monitoring during Year Two of the Mukilteo Multimodal Project. During 51 days of monitoring from September 2017 to February 2018 under the 2017 IHA, zero bottlenose dolphins were observed (WSDOT, 2018).

Long-beaked common dolphin- Long-beaked common dolphins from the California stock could be present near the project area. The earliest documented sighting of long-beaked common dolphins in Puget Sound was July 2003. In June 2011, two long-beaked common

dolphins were sighted in South Puget Sound. Sightings continued in 2012, and in 2016-17. Four to twelve sightings were reported regularly, with confirmed sightings of up to 30 individuals. Four to six dolphins have remained in Puget Sound since June 2016 and four animals with distinct markings have been seen multiple times and in every season of the year as of October 2017 (CRC 2017b). During 51 days of monitoring from September 2017 to February 2018 under the 2017 IHA, zero long-beaked common dolphins were observed (WSDOT, 2018).

Potential Effects on Marine Mammals—A description of the potential effects of the specified activities on marine mammals and their habitat is found in these previous documents, which remains applicable to this IHA. There is no new information on potential effects and we anticipate the effects evaluated last year are germane to the three additional species (minke whale, bottlenose dolphin, and long-beaked common dolphin) authorized to be taken this year.

Harassment Zones – We updated three source levels (24-in vibratory pile driving and removal and 24-in impact driving) for use in calculating Level A harassment isopleths. The 2017 IHA reflected a 24-in vibratory pile driving source level of 162 decibels (dB) root mean square (rms) based on measurements at Friday Harbor; however, we believe that measurements of vibratory driving of 24-in piles at Manette Bridge support a higher source level of 166 dB rms (Loughlin, 2010). We propose to carry over that source level to estimate noise levels generated by vibratory removal of the same size pile. New analysis of measurements made at the Coupeville Terminal also supports increasing the sound exposure level (single-strike; SEL) during 24-in impact pile driving from 174 dB SEL to 178 dB SEL (WSDOT, 2017). To estimate distances to the Level B harassment isopleth for vibratory driving 24 – 36-in piles, we applied new acoustic measurement data (Loughlin, 2017). For this proposed IHA, we also modified the method used to estimate Level A harassment zones. The 2017 IHA analysis used a more sophisticated modeling

technique, described in detail in our 2017 Notice of Proposed IHA (citation). It is not warranted to replicate that complicated process for this action. Therefore, we used the NMFS User Spreadsheet tool to estimate Level A harassment distances. This approach is more conservative than the previous modeling effort because it considers a single frequency weighting factor adjustment (WFA) in lieu of considering the full frequency spectrum. Using a single frequency WFA is likely to over-predict Level A harassment distances as described in NMFS (2016), resulting in larger Level A harassment distances. The inputs used in the spreadsheet and resulting Level A harassment distances are presented in Table 3 and 4, respectively. Table 4 also contains the distances estimated to the Level B harassment zones from each type of work. Table 5 provides the corresponding Level B harassment areas, as well as the Level A harassment areas for those species for which we propose to authorize take by Level A harassment.

Table 3. Inputs into NMFS User Spreadsheet.

Input Parameter	Vibratory Pile Driving	Impact Pile Driving
Weighting Factor Adjustment ¹	2.5 kHz	2 kHz
Source Level (SL)	See Table 4	See Table 4 (SEL value)
Duration	3 hours (24 -36" piles) 2 hours (78" piles) 1 hour (120" pile)	n/a
Strikes per pile	n/a	300
Piles per day	n/a	3
Transmission loss coefficient	15	15
Distance from SL measurement	10 m	10 m

¹ In instances where full auditory weighting functions associated with the SEL_{cum} metric cannot be applied, NMFS has recommended the default, single frequency weighting factor adjustments (WFAs) provided here. As described in Appendix D of NMFS' Technical Guidance (NMFS, 2016), the intent of the WFA is to broadly account for auditory weighting functions below the 95 frequency contour percentile. Use of single frequency WFA is likely to over-predict Level A harassment distances.

Table 4. Level A harassment Distances Considering Pile Driving Duration per 24 Hours.

Method	Pile	Source	Level A (meters)	Level B
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	Size	Level (dB)						(m)
			LF ¹	MF ¹	HF ¹	PH ¹	OT ¹	
Vibratory	24	166 rms ²	30.6	2.7	45.3	18.6	1.3	8000 ⁶
	30	174 rms ³	104.5	9.3	154.5	63.5	4.5	8000 ⁶
	36	177 rms ³	165.6	14.7	244.9	100.7	7.1	8700 ⁷
	78	180 rms ⁴	200.3	17.8	296.2	121.8	8.5	20,000 ⁸
	120	180 rms ⁴	126.2	11.2	186.6	76.7	5.4	
Impact	24	178 SEL (single strike)/ 193 rms ⁵	432.1	15.4	514.7	231.2	16.8	1,585

¹ The abbreviation mean: LF= low frequency cetacean, MF = mid-frequency cetacean, HF= high- frequency cetacean, PH = phocid, OT = otariid.

²We assume vibratory removal and vibratory driving the same size pile would result in equal sound levels. Source level for 24" piles is based on direct measurements during the Manette Bridge project (Loughlin, 2010a). ³Source levels for 30-in and 36-in piles is based on direct measurements during the Port Townsend Project (Loughlin, 2010b).

⁴ WSDOT does not have noise data for 78 and 120-in piles; therefore, we used data from Caltrans (2015).

⁵ Single strike SEL and rms values for impact driving 24-in piles is based on direct measurements during pile driving using a bubble curtain (*i.e.*, source levels are attenuated) at the Coupeville Terminal (WSDOT, 2017).

⁶ Measurements during 30" vibratory pile driving at Mukilteo in 2017 indicate pile driving was not detected at range of 7.9 km (Laughlin, 2017a). This equates to 66 km².

⁷At the Coleman Terminal, vibratory installation of two 36" piles driven simultaneously was not detectable at 8.69 km (5.4 miles) (Laughlin 2017b). This equates to 69 km².

⁸The calculated Level B zone using a practical spreading loss model is 85,770 m; however, land is reached at a maximum of 20,000 m (Lowell Point on Camano Island). This equates to 107 km².

Table 5. Corresponding Harassment Threshold Ensonified Areas.

Method	Pile Size	Level A (km ²) ¹			Level B (km ²) ²
		HF	PH	OT	
Vibratory	24	<0.01	<0.01	<0.01	66
	30	<0.01	<0.01		66
	36	0.06	0.06		69
	78	0.01	0.01		107
	120	0.01	0.01		
Impact	24	0.4	0.4		4

¹ Level A harassment areas are provided for species hearing groups for which Level A take is proposed.

² Level B harassment areas are germane to all species.

Estimated Take—A description of the methods used to estimate take anticipated to occur from the project is found in the project's aforementioned documents. The methods of estimating take are identical to those used in the previous IHA, including the use of the Navy 2015 marine mammal densities for inland Washington or most recent pinniped counts. We also updated

harbor porpoise and Dall's porpoise density based on new information (Smultea et al., 2017 and Navy 2015, respectively). Because bottlenose dolphin and long-beaked common dolphin

densities do not exist for this area, we used available data to estimate a sighting rate. Table 6 includes marine mammal count or density information used in the estimated take calculations.

Table 6. Marine Mammal Counts and Densities Used to Estimate Take.

	Density (ind/km²)	Count
Harbor seal	-	30/day ¹
CSL	-	14/day ²
N. elephant seal	-	1/ 30 days ³
Killer whale- transient	-	0.3/day ⁴
SSL	0.0368 ⁵	-
Gray whale	0.00051 ⁵	-
Humpback whale	0.00007 ⁵	-
Dall's porpoise	0.039 ⁵	-
Harbor porpoise	0.75 ⁶	-
Minke whale	0.002 ⁵	-
Bottlenose dolphin	-	1 group of 7 / 30 days ⁷
Long-beaked common dolphin	-	1 group of 7 / 30 days ⁷

¹ During 51 days of marine mammal monitoring at the Mukilteo Terminal during 2017 – 2018 construction (conducted under WSDOT's previous IHA), 1,525 harbor seals were observed for an average of 30 seals per day.

² During 51 days of marine mammal monitoring at the Mukilteo Terminal during 2017 – 2018 construction (conducted under WSDOT's previous IHA), 707 California sea lions were observed for an average of 14 sea lions per day.

³ WSDOT estimates 1 Northern elephant seal may occur in the action area once per month.

⁴ During 51 days of marine mammal monitoring at the Mukilteo Terminal during 2017 – 2018 construction (conducted under WSDOT's previous IHA), 16 transient killer whales observed for an average of 0.3 killer whales per day.

⁵ These densities were derived for the Navy's Northwest Testing and Training Range Inland Waters (Navy, 2015).

⁶ Density based on East Whidbey stratum, Table 17 in Smultea (2017).

⁷ Average group size and sighting frequency based on CRC, 2017.

The rationale for the amount of take requested and proposed is as follows: For all estimates, we consider 76 days over seven months of pile driving. For density based estimates, the equation used is *density x area x number of pile driving days* summed across all piles types (Table 7) Because 24-in and 30-in piles have the same Level B harassment zone, we grouped

these together. We also combined 78-in and 120-piles as they also have the same Level B harassment zone.

For harbor porpoise, we calculated take using the density identified in Table 6; however, this greatly exceeded expected take based on previous marine mammal monitoring efforts around the terminal (e.g., WSDOT, 2018); therefore, we applied a 10 percent correction factor. For 24-in and 30-in piles: $0.75 \times 66 \text{ km}^2 \times 61 \text{ days}$ (vibratory installation and removal) equals 3020 animals. For 36-in piles: $0.75 \times 69 \text{ km}^2 \times 2 \text{ days}$ equals 104 animals. For 78-in and 120-in piles: $0.75 \times 107 \text{ km}^2 \times 2 \text{ days} = 161 \text{ animals}$. In total, we calculate 3,285 harbor porpoise could be taken. However, marine mammal monitoring conducted under the 2017 IHA yielded only 85 harbor porpoise sightings of which 28 were taken by harassment. Therefore, we are proposing to authorize 10 percent of the calculate take for a total of 329 harbor porpoise. We also calculated Level A takes of harbor porpoise for the four days vibratory driving 36-in through 120-in piles would occur and the 30 days of impact hammering 24-inch piles because vibratory driving 24-in piles does not produce a Level A harassment zone greater than the shut down zone and is very close to the pile (18.6 m). The resulting Level A harassment take is 12 harbor porpoise. We repeated this approach for Dall's porpoise and the Level B harassment take estimate approach for minke whales, humpback whales, gray whales, and Steller sea lions. We are not proposing Level A harassment take of the latter three species.

For estimates considering counts, we considered the following. Over 51 days of marine mammal monitoring during the 2017/18 Mukilteo project, 1,525 harbor seals were observed. During active pile driving, 499 Level B takes and 15 Level A takes (or 3 percent of authorized Level B takes of harbor seals) were recorded, approximately 34 percent of the number of animals observed. To be conservative, it is assumed that up to 75 percent of the seals observed may be

taken under this IHA, or 21 seals per day x 76 days = 1,596. We are allocating five percent of that amount to Level A take which is slightly greater than the three percent documented under the 2017 IHA. Therefore, we propose to authorize 80 Level A harassment takes and 1516 Level B harassment takes for a total of 1,596 harbor seal takes. California sea lion takes considered 14 animals x 76 days for a total of 1,064 Level B harassment takes. We are not proposing to authorize Level A harassment because the Level A harassment zones are very small based on one to three hours of pile driving and no California sea lions were taken by Level A harassment under the 2017 IHA. Northern elephant seals are rare but we are proposing to authorize take, by Level B harassment only, of 7 individuals (one per month). Up to 23 positively identified transient killer whales may be taken (0.3 animals x 76 days; see mitigation on killer whale identification) while only 5 gray whales and 6 humpback whales (see Endangered Species Act section) are proposed to be taken. See Table 7 for all proposed take numbers, by species, and the respective amount of the population that take represents.

Table 7. Requested Take Amount, per species, Relative to Population Size.

	Level A	Level B	Total Take	% Population
Harbor seal	80	1,516	1596	14.5
CSL	0	1,064	1064	0.4
N. elephant seal	0	7	7	>0.01
Killer whale-transient	0	23	23	9.5
SSL	0	161	161	0.2
Gray whale	0	5	5	0.02
Humpback whale	0	6	6	0.3
Dall's porpoise	4	7	12	0.05
Harbor porpoise	12	329	341	3.04
Minke whale	0	7	8	1.3
Bottlenose dolphin	0	49	49	10.8
Long-beaked common dolphin	0	49	49	0.04

Description of Proposed Mitigation, Monitoring and Reporting Measures—A description of proposed mitigation, monitoring, and reporting measures is found in the previous documents, which are nearly identical in this proposed IHA. In summary, mitigation includes use of an unconfined bubble curtain (with operational standards set by the U.S. Fish and Wildlife Service) and soft start techniques during impact pile driving in greater than 2 ft of water, minimum 10 m shut down zone, and species-dependent shut down zones as described in Table 8. Some of these shut down zones fully encompass the Level A harassment zone; however, for species where we propose Level A take, this might not always be the case.

Table 8. Shut-Down Zones.

Method	Pile Size	Level A (meters)					Level B (m)
		LF	MF	HF	PH	OT	
Vibratory	24	35	10	50	20	10	8000
	30	105	10	150	60		8000
	36	170	20	200			8690
	78	205					20,000
	120	130					
Impact	24	435				20	1585

Monitoring requirements would be similar to the 2017 IHA requirements (see an updated Marine Mammal Monitoring Plan available at <https://www.fisheries.noaa.gov/node/23111>). The number and location of Protected Species Observers (PSOs) is dependent upon activity and weather conditions and are as follows:

- (i) three land-based PSOs during impact driving of 24-in piles;
- (ii) four land-based and one ferry-based PSOs during 24-, 30-, 36-in steel vibratory driving/removal;
- (iii) five land-based and one ferry-based PSOs during 78- and 120 in steel vibratory driving/removal; and
- (iv) two ferry-based PSOs in addition to land-based PSOs when weather conditions are poor.

In April, 2018, WSDOT submitted a monitoring report for construction that had been completed under the 2017 IHA. WSDOT complied with all mitigation, monitoring, and reporting protocols. Recorded takes were below the number authorized for the corresponding amount of work. The monitoring report can be viewed on NMFS's website at <https://www.fisheries.noaa.gov/node/23111>.

WSDOT will conduct acoustic monitoring during impact pile driving of 24-in piles per the acoustic monitoring plan submitted for the previous IHA. WSDOT will also conduct acoustic monitoring during vibratory driving 78-in and 120-in piles. Both the impact and vibratory acoustic monitoring plans are available at <https://www.fisheries.noaa.gov/node/23111>.

Preliminary Determinations

WSDOT proposes to conduct a subset of activities identical to those covered in the previous 2017 IHA. We have included take for three new species noting these are precautionary as these species are not common in the action area and these species were not observed during the project during previous construction. We also believe the potential behavioral reactions and effects on the cetacean species previously analyzed is applicable to these species, if not to some lesser extent due to lower probability of occurrence.

When issuing the 2017 IHA, NMFS found Phase 2 of the Mukilteo Multimodal Project, in its entirety, would have a negligible impact to species or stocks' rates of recruitment and survival and the amount of taking would be small relative to the population size of such species or stock (less than 15 percent). As described above, the number of estimated takes of the same stocks are less than takes authorized in the 2017 IHA and the anticipated impacts from the project are similar to those previously analyzed. The amount of take for the additional three species is also small (less than 11 percent of each stock). The proposed IHA includes identical

required mitigation, monitoring, and reporting measures (albeit some minor modification to harassment and shutdown distances) as the 2017 IHA. In conclusion, there is no new information suggesting that our analysis or findings should change.

Based on the information contained here and in the referenced documents, NMFS has preliminarily determined the following: (1) the required mitigation measures will effect the least practicable impact on marine mammal species or stocks and their habitat; (2) the authorized takes will have a negligible impact on the affected marine mammal species or stocks; (3) the authorized takes represent small numbers of marine mammals relative to the affected stock abundances; and (4) WSDOT's activities will not have an unmitigable adverse impact on taking for subsistence purposes as no relevant subsistence uses of marine mammals are implicated by this action.

Endangered Species Act

Section 7(a)(2) of the Endangered Species Act of 1973 (ESA: 16 U.S.C. 1531 et seq.) requires that each Federal agency insure that any action it authorizes, funds, or carries out is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of designated critical habitat. To ensure ESA compliance for the issuance of IHAs, NMFS consults internally, in this case with the West Coast Region Protected Resources Division Office, whenever we propose to authorize take for endangered or threatened species. NMFS is proposing to authorize take of humpback whales from the Central American and Mexico DPSs, which are listed under the ESA.

The effects of this proposed Federal action were adequately analyzed in NMFS' Biological Opinion for the Mukilteo Multimodal Project, Snohomish, Washington, dated August 1, 2017, which concluded that issuance of an IHA would not jeopardize the continued existence

of any endangered or threatened species or destroy or adversely modify any designated critical habitat. NMFS West Coast Region has confirmed the Incidental Take Statement issued in 2017 is applicable for the proposed IHA. That ITS authorizes the take of six humpback whales.

Proposed Authorization

As a result of these preliminary determinations, we are proposing to issue an IHA to WSDOT to conduct the specified activities at the Mukilteo Ferry Terminal from September 1, 2018, through August 31, 2019, provided the previously described mitigation, monitoring, and reporting requirements are incorporated.

This section contains a draft of the IHA itself. The wording contained in this section is proposed for inclusion in the IHA (if issued).

1. This Authorization is valid from September 1, 2018, through August 31, 2019.
2. This Authorization is valid only for activities associated with Phase 2 of the Mukilteo Multimodal Project, Puget Sound, Washington.
3. General Conditions
 - (a) A copy of this IHA must be in the possession of WSDOT, its designees, and work crew personnel operating under the authority of this IHA
 - (b) The species authorized for taking are found in Table 7.
 - (c) The taking, by Level A and B harassment only, is limited to the species listed in condition 3(b). See Table 7 for numbers of take authorized.
 - (d) The taking by serious injury or death of any of the species listed in condition 3(b) of the Authorization or any taking of any other species of marine mammal is prohibited and may result in the modification, suspension, or revocation of this IHA.
 - (e) WSDOT shall conduct briefings between construction supervisors and crews, marine mammal monitoring team, acoustical monitoring team, and WSDOT staff prior to the start of all pile driving, and when new

personnel join the work, in order to explain responsibilities, communication procedures, marine mammal monitoring protocol, and operational procedures.

4. Mitigation.

(a) In-water construction work shall occur only during daylight hours during the established in-water work window (July 15 through February 15).

(b) For in-water heavy machinery activities other than pile driving, if a marine mammal comes within 10 m, operations shall cease and vessels shall reduce speed to the minimum level required to maintain steerage and safe working conditions.

(c) Pre-activity monitoring shall take place from 30 minutes prior to initiation of pile driving activity and post-activity monitoring shall continue through 30 minutes post-completion of pile driving activity. Pile driving may commence at the end of the 30-minute pre-activity monitoring period, provided observers have determined that the shutdown zone is clear of marine mammals, which includes delaying start of pile driving activities if a marine mammal is sighted in the zones identified in Table 8.

(d) If a marine mammal approaches or enters the shutdown zone during activities or pre-activity monitoring, all pile driving activities at that location shall be halted or delayed, respectively. If pile driving is halted or delayed due to the presence of a marine mammal, the activity may not resume or commence until either the animal has voluntarily left and been visually confirmed beyond the shutdown zone and 15 minutes have passed without re-detection of the animal. Pile driving activities include the time to install or remove a single pile or series of piles, as long as the time elapsed between uses of the pile driving equipment is no more than thirty minutes.

(e) WSDOT shall use soft start techniques when impact pile driving. Soft start requires contractors to provide an initial set of strikes at reduced energy, followed by a thirty-second waiting period, then two subsequent reduced energy strike sets. Soft start shall be implemented at the start of each day's impact pile driving and at any time following cessation of impact pile driving for a period of thirty minutes or longer.

(f) WSDOT shall use a bubble curtain during impact driving of 24-in piles in greater than 2 feet of water. Should acoustic measurements identify that average source levels exceed those estimated for this activity

(173 dB SEL, 193 dB rms), WSDOT shall contact NMFS Office of Protected Resources within 48 hours to determine if adjustments to harassment zones are warranted.

(g) For all pile activities, the number and location of Protected Species Observers (PSOs) is dependent upon activity and weather conditions and are as follows:

- (i) three land-based PSOs during impact driving of 24-in piles;
- (ii) four land-based and one ferry-based PSOs during 24-, 30-, 36-inch steel vibratory driving/removal;
- (iii) five land-based and one ferry-based PSOs during 78- and 120 inch steel vibratory driving/removal; and
- (iv) two ferry-based PSOs in addition to land-based PSOs when weather conditions are poor.

(h) Southern Resident Killer Whales (SRKW)

(i) If a killer whale approaches the monitoring zone during pile driving or removal, and it is unknown whether it is a SRKW or a transient killer whale, it shall be assumed to be a SRKW and WSDOT shall implement the shutdown measure identified in 4(k).

(ii) If a SRKW enters the monitoring zone undetected, WSDOT shall contact the Offices of Protected Resources within 24 hours to determine if additional monitoring is necessary to avoid future incidences.

(iii) Coordination with Local Marine Mammal Research Network- Prior to the start of pile driving, WSDOT will contact the Orca Network and/or Center for Whale Research to get real-time information on the presence or absence of whales before starting any pile driving. WSDOT will also monitor the Orca Network site for visual and acoustic detections.

(k) If a species for which authorization has not been granted, or a species for which authorization has been granted but the authorized takes are met, is observed approaching or within the Level B harassment zone for the pile size and method used (Table 8), pile driving and removal activities must shut down immediately using delay and shut-down procedures. Activities

must not resume until the animal has been confirmed to have left the area or the observation time period, as indicated in 4(d)above, has elapsed.

5. Monitoring

(a) Monitoring of pile driving shall be conducted by qualified PSOs (see below), who shall have no other assigned tasks during monitoring periods. WSDOT shall adhere to the following conditions when selecting observers:

(iv) Independent PSOs shall be used (i.e., not construction personnel).

(ii) At least one PSO must have prior experience working as a marine mammal observer during construction activities.

(iii) Other PSOs may substitute education (degree in biological science or related field) or training for experience.

(iv) Where a team of three or more PSOs are required, a lead observer or monitoring coordinator shall be designated. The lead observer must have prior experience working as a marine mammal observer during construction.

(v) WSDOT shall submit PSO CVs for approval by NMFS prior to the onset of pile driving.

(vi) WSDOT shall ensure that observers have the following additional qualifications:

(vii) Ability to conduct field observations and collect data according to assigned protocols.

(viii) Experience or training in the field identification of marine mammals, including the identification of behaviors.

(ix) Sufficient training, orientation, or experience with the construction operation to provide for personal safety during observations.

(x) Writing skills sufficient to prepare a report of observations including but not limited to the number and species of marine mammals observed; dates and times when in-water construction activities were conducted;

dates, times, and reason for implementation of mitigation (or why mitigation was not implemented when required); and marine mammal behavior.

(xi) Ability to communicate orally, by radio or in person, with project personnel to provide real-time information on marine mammals observed in the area as necessary.

(b) WSDOT shall conduct acoustic monitoring per their impact and vibratory monitoring plans.

Acoustic monitoring shall be conducted early at the onset of pile work.

6. Reporting

(a) WSDOT shall provide NMFS with a draft monitoring report within 90 days of the conclusion of the construction work or within 90 days of the expiration of the IHA, whichever comes first. This report shall detail the monitoring protocol, summarize the data recorded during monitoring, and estimate the number of marine mammals that may have been harassed.

(b) If comments are received from NMFS Office of Protected Resources on the draft report, a final report shall be submitted to NMFS within 30 days thereafter. If no comments are received from NMFS, the draft report will be considered to be the final report.

(c) In the unanticipated event that the construction activities clearly cause the take of a marine mammal in a manner prohibited by this Authorization (if issued), such as an injury, serious injury, or mortality, WSDOT shall immediately cease all operations and immediately report the incident to the Office of Protected Resources, NMFS, and the West Coast Regional Stranding Coordinators. The report must include the following information:

- (i) Time, date, and location (latitude/longitude) of the incident;
- (ii) Description of the incident;
- (iii) Status of all sound source use in the 24 hours preceding the incident;
- (iv) Environmental conditions (*e.g.*, wind speed and direction, sea state, cloud cover, visibility, and water depth);

- (v) Description of marine mammal observations in the 24 hours preceding the incident;
- (vi) Species identification or description of the animal(s) involved;
- (vii) Fate of the animal(s); and
- (viii) Photographs or video footage of the animal (if equipment is available).

Activities shall not resume until NMFS is able to review the circumstances of the prohibited take. NMFS shall work with WSDOT to determine what is necessary to minimize the likelihood of further prohibited take and ensure MMPA compliance. WSDOT may not resume their activities until notified by NMFS via letter, email, or telephone.

(d) In the event that WSDOT discovers an injured or dead marine mammal, and the lead PSO determines that the cause of the injury or death is unknown and the death is relatively recent (*i.e.*, in less than a moderate state of decomposition as described in the next paragraph), WSDOT will immediately report the incident to the Office of Protected Resources, NMFS, and the West Coast Regional Stranding Coordinators. The report must include the same information identified above. Activities may continue while NMFS reviews the circumstances of the incident. NMFS will work with WSDOT to determine whether modifications in the activities are appropriate.

(e) In the event that WSDOT discovers an injured or dead marine mammal, and the lead PSO determines that the injury or death is not associated with or related to the activities authorized in the IHA (*e.g.*, previously wounded animal, carcass with moderate to advanced decomposition, or scavenger damage), WSDOT shall report the incident to the Office of Protected Resources, NMFS, and the West Coast Regional Stranding Coordinators, within 24 hours of the discovery. WSDOT shall provide photographs or video footage (if available) or other documentation of the stranded animal sighting to NMFS and the Marine Mammal Stranding Network. WSDOT can continue its operations under such a case.

7. This Authorization may be modified, suspended or withdrawn if the holder fails to abide by the conditions prescribed herein or if NMFS determines the authorized taking is having more than a negligible impact on the species or stock of affected marine mammals.

Request for Public Comments

We request comment on our analyses, the proposed authorization, and any other aspect of this Notice of Proposed IHA for the remaining work associated with the Mukilteo Multimodal Project. We also request comment on the potential for renewal of this proposed IHA as described in the paragraph below. Please include with your comments any supporting data or literature citations to help inform our final decision on the request for MMPA authorization.

On a case-by-case basis, NMFS may issue a second one-year IHA without additional notice when 1) another year of identical or nearly identical activities as described in the Specified Activities section is planned or 2) the activities would not be completed by the time the IHA expires and a second IHA would allow for completion of the activities beyond that described in the Dates and Duration section, provided all of the following conditions are met:

- (a) A request for renewal is received no later than 60 days prior to expiration of the current IHA.

- (b) The request for renewal must include the following:

- (i) An explanation that the activities to be conducted beyond the initial dates either are identical to the previously analyzed activities or include changes so minor (e.g., reduction in pile size) that the changes do not affect the previous analyses, take estimates, or mitigation and monitoring requirements; and

(ii) A preliminary monitoring report showing the results of the required monitoring to date and an explanation showing that the monitoring results do not indicate impacts of a scale or nature not previously analyzed or authorized.

(c) Upon review of the request for renewal, the status of the affected species or stocks, and any other pertinent information, NMFS determines that there are no more than minor changes in the activities, the mitigation and monitoring measures remain the same and appropriate, and the original findings remain valid.

Dated: June 25, 2018.

Elaine T. Saiz,

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Office of Protected Resources,

National Marine Fisheries Service.

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